

DC/DC CONVERTER WITH DEPLETION MODE COMPOUND  
SEMICONDUCTOR FIELD EFFECT TRANSISTOR SWITCHING DEVICE

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Abstract of the Disclosure

In one embodiment, a dc/dc converter network (71) is described. The converter network (71) includes at least one GaAs depletion mode or normally on FET device (711, 712). The converter network (71) is a two-port system having a positive input terminal (710), a positive output terminal (730), and a negative input terminal (720) connected to a negative output terminal (740). A first GaAs depletion mode FET (711) is connected between the positive input terminal (710) and an internal node (795). A second GaAs depletion mode FET (712) is connected between the internal node (795) and the common negative terminals (720, 740). A control circuit (780) is connected gate leads of the two FETs (711, 712), to alternatively switch the devices from a current conducting mode to a current blocking mode. An inductor (760) is connected between the internal node (795) and the positive output terminal (730). The GaAs depletion mode devices provide a converter network with improved performance.